In the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-14 (Cancelled)

15. (Previously presented) An arbitrative apparatus of access request arbitration, comprising:

a plurality of access request selectors, each of the plurality of access request selectors receiving a plurality of access requests; and

an ownership selector, coupled to the plurality of access request selectors, when an access request is being executed, an asking point out signal is sent out to ask for pointing out a position of a next access request;

a specified priority level, wherein the access request selectors each selects one of the access requests having the specified priority level, and wherein said ownership selector receives outputs of the plurality of access request selectors and arranges the outputs into a priority queue;

wherein the ownership selector receives an access request having a priority level lower than the specified priority level, such that the access request having the priority level lower than the specified priority level

obtains an access after all the access requests having the specified priority level have been executed at least once.

16. (Previously presented) The arbitrative apparatus of claim 15, further comprising:

a priority setting register coupled to the plurality of access request selectors for setting request numbers of access requests having said specified priority level.

17. (Previously presented) The arbitrative apparatus of claim 16, further comprising:

an ownership multiplexer for finding the corresponding request number of the access request from the priority setting register according to the position in said priority queue.

18. (Previously presented) The arbitrative apparatus of claim 15, wherein said ownership selector further comprises a next ownership selector unit for pointing out the position of the next access request when receiving said asking point out signal.

19. (Previously presented) The arbitrative apparatus of claim 15, further comprising:

an OR gate with multi-inputs coupled to receive outputs of the access request selectors having the priority level lower than the specified priority level, an output of the OR gate being inputted to the last position of the priority queue of the ownership selector having the

specified priority level.

20. (Previously presented) The arbitrative apparatus of claim 15, further comprising:

a 2-input AND gate, in which one input coupled to said ownership selector to estimate whether said asking point out signal is sent, another input coupled to receive an estimation signal to estimate whether the next access request is at the last position of the priority queue, and an output is coupled to the ownership selector having the priority level lower than the specified priority level, wherein when both the inputs are true, then the next access request having the priority level lower than the specified priority level is pointed out.

21. (Previously presented) The arbitrative apparatus of claim 15, wherein at least one said arbitrative apparatus with different priority level can be combined as an arbitrative mechanism wherein said arbitrative mechanism can be an arbiter.

22. (Previously presented) An arbiter of access request arbitration, comprising:

a plurality of arbitrative apparatus, each one having a different priority level;

wherein each one of the arbitrative apparatus with different priority level comprises:

a plurality of access request selectors, each of

the plurality of access request selectors receiving a plurality of access requests; and

an ownership selector, coupled to the plurality of access request selectors, wherein when an access request is being executed, an asking point out signal is sent out to ask for pointing out a position of a next access request;

wherein the access request selectors each select one of the access requests having same priority level, and wherein said ownership selector receives outputs of the plurality of access request selectors and arranges the outputs into a priority queue;

wherein the ownership selector receives an access request from the arbitrative apparatus having a lower priority level, such that the access request having the lower priority level obtains an access after all the access requests having a higher priority level have been executed at least once.

23. (Previously presented) The arbiter of claim 22, further comprising:

a priority setting register coupled to the plurality of access request selectors for setting request numbers of access requests having the same priority level.

24. (Previously presented) The arbiter of claim 23, further comprising:

an ownership multiplexer for finding the corresponding request number of the access request from the priority setting register according to the position in said priority queue.

25. (Previously presented) The arbiter of claim 22, wherein said ownership selector further comprises a next ownership selector unit for pointing out the position of the next access request when receiving said asking point out signal.

26. (Previously presented) The arbiter of claim 22, further comprising:

an OR gate with multi-inputs coupled to receive outputs of the access request selectors having the lower priority level, an output of the OR gate being inputted to the priority queue of the ownership selector having the higher priority level.

27. (Previously presented) The arbiter of claim 22, further comprising:

a 2-input AND gate, in which one input is coupled to said ownership selector to estimate whether said asking point out signal is sent, another input is coupled to receive an estimation signal to estimate whether the next access request is the last access request of priority queue, and an output is coupled to the ownership selector having the lower priority level, wherein when both inputs

are true, the next access request having the lower priority level is pointed out.